



# Hampton Court House

## Curriculum Outline 2019/20 – Year 9 Physics (JWM)

### Autumn 2019

Principal Text: *Collins GCSE 9-1 Physics*

We will start by looking at forces and motion in detail. Students will learn about the types of force and how they are represented, and then look at how forces link to motion.

Students will begin the GCSE Physics topic of atoms, looking at atomic structure and radioactivity.

Quizzes will happen often and tests will occur at the end of each half-term.

Tests will assess scientific knowledge and application of knowledge to new situations.

GCSE material covered this year will be revisited in Years 10 and 11.

Links with fundamental values

Fundamental values are promoted through having a supportive classroom ethos founded on mutual respect and individual liberty.

Topics such as cosmology require sensitive appreciation of the beliefs of others. Students will develop their ability to discuss respectfully with those of different beliefs.

Social, moral, spiritual and cultural content  
The cultural and spiritual importance of space and the solar system will be discussed. We will also consider safety in cars and other moving systems.

In addition, contributions of scientists from various faiths and cultures, and from historically underrepresented groups such as women and LGBT+ people will be highlighted.

### Spring 2020

Principal Text: *Collins GCSE 9-1 Physics*

Students will continue with the atomic structure and radioactivity topic. The uses of radioactivity in medicine, power generation, scientific discovery, and industry will be investigated as well as the dangers posed by radiation and how to mitigate against such dangers.

### Summer 2020

Principal Text: *Collins GCSE 9-1 Physics*

Students will look into astrophysics, starting with the life cycle of stars. They will then look in detail at the objects in our solar system.

We will move on to the challenging mathematics of orbital mechanics, and the application of this to man-made satellites.

We finish the topic by looking at deep space and cosmology, black holes, and the origins and possible futures of our universe.